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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR           | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|--------------------------------|---------------------|------------------|
| 10/626,025      | 07/24/2003  | Karl Hakan Torbjorn Gardenfors | 34650-179USC2       | 1268             |

7590

05/17/2005

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EXAMINER

ZIMMERMAN, BRIAN A

ART UNIT

PAPER NUMBER

2635

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/626,025

**Applicant(s)**

GARDENFORS ET AL.

**Examiner**

Brian A. Zimmerman

**Art Unit**

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 38-63 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 38-63 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/9/05  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

### ***Informalities***

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification or in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)).

The applicant is reminded to update the status of the applications listed in the first sentence of the specification.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 38-43,45-58,60-63 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent No. 6633550 in view of the IEEE document to Crols (A Single-Chip 900 MHz CMOS Receiver Front-End with a High Performance Low-IF Topology). Although the conflicting claims are not identical, they are not

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patentably distinct from each other. The claims correspond to each other according to the following table:

| Pending Claims       | Claims from 6633550 and Crols |
|----------------------|-------------------------------|
| 38,45-49,52,53,60-63 | 1,14                          |
| 41,51,56             | 6                             |
| 42,57                | 9                             |
| 43,58                | 13                            |
| 50                   | 2                             |

The pending claims differ from the patented claims in that the pending claims include a bandpass filter located on the single IC chip. In an analogous, Crols suggests that single chip construction of a communication transceiver is possible and using particular methods disclosed by Crols, such a single chip can include all the components including the entire band pass filter that can be located entirely on the chip. See page 1484, second and third full paragraphs.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have included all the elements claimed on a single chip to reduce costs in manufacturing a device using the communication chip.

2. Claims 39,40,44,54,55 and 59 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent No. 6633550 in view of the IEEE document to Stetzler (A 2.7-4.5 V Single Chip GSM Transceiver RF Integrated Circuit). Although the conflicting claims are not identical, they are not patentably distinct from each other.

| Pending Claims | Claims from 6633550 and Crols |
|----------------|-------------------------------|
| 39,54          | 4                             |
| 40,55          | 5                             |
| 44,59          | 1                             |

The pending claims differ from the patented claims in that the pending claims include a directly modulated VCO and power down control circuit on the single IC chip. In an analogous, Stetzler suggests that single chip construction of a communication transceiver is possible and using particular methods disclosed by Stetzler, such a single chip can include a directly modulated VCO and a power down control circuit that can be located entirely on the chip. See page 1421 first Introduction paragraph, and the transmit path section of this document.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have included all the elements claimed on a single chip to reduce costs in manufacturing a device using the communication chip.

3. Claims 38,41,45-53,56,60-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okanobu (GB 2296610) in view of the IEEE document to Crols (A Single-Chip 900 MHz CMOS Receiver Front-End with a High Performance Low-IF Topology).

Okanobu shows a radio on a single IC chip. Okanobu shows an antenna section for transmitting and receiving a plurality of HF signals and means for transmitting and receiving the HF signals, figures 1,2 page 1 lines 6-19. Okanobu shows a down conversion section coupled to the antenna for down converting a HF signal to a low IF signal, page 1 line 20-page 2 line 6. The particular IF chosen is well within the level of skill of an artisan. Okanobu shows bandpass filters 13,23 coupled to the down conversion section, page 4 lines 16-22.

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Okanobu shows a discriminator coupled to the bandpass filter, page 7 lines 9-14.

Okanobu shows an up conversion section coupled to the antenna for up converting a second HF signal, the up conversion section includes a portion of the down conversion section, elements 30,311,431, page 8 lines 1-13. Okanobu shows a shaping filter coupled to the input of the up conversion section, page 8 lines 1-3. Okanobu shows the use of variable controlled oscillator.

Additionally, Okanobu does not expressly show all the claimed elements on a single IC. Okanobu does disclose all but the filter being on the same IC. It has been held that forming in one piece an article, which has formerly been formed in two pieces, and put together, involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have integrated the elements of Okanobu onto a single IC.

In an analogous art, Crols suggests that single chip construction of a communication transceiver is possible and using particular methods disclosed by Crols, such a single chip can include all the components including the entire band pass filter that can be located entirely on the chip. See page 1484, second and third full paragraphs. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have included all the elements claimed on a single chip to reduce costs in manufacturing a device using the communication chip.

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4. Claims 39,40,44,54,55 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okanobu (GB 2296610) in view of the IEEE document to Crols as applied to claims 38 and 53 above and further in view of the IEEE document to Stetzler (A 2.7-4.5 V Single Chip GSM Transceiver RF Integrated Circuit).

In an analogous, Stetzler suggests that single chip construction of a communication transceiver is possible and using particular methods disclosed by Stetzler, such a single chip can include a directly modulated VCO and a power down control circuit that can be located entirely on the chip. See page 1421 first Introduction paragraph, and the transmit path section of this document.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have included all the elements claimed on a single chip to reduce costs in manufacturing a device using the communication chip.

Applicant's arguments (11/12/04) with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is

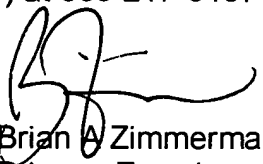
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filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian A. Zimmerman whose telephone number is 571-272-3059. The examiner can normally be reached on Off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Horabik can be reached on 571-272-3068. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brian A. Zimmerman  
Primary Examiner  
Art Unit 2635

BAZ